

Keynote Speech of CPUC Commissioner Rachelle Chong
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“Telecommunications Sure Isn’t Your Father’s Oldsmobile Anymore”

Thank you very much for allowing a Commissioner from the Republic of California to speak to you.

Today, I am going to talk about the challenges of being a regulator in the fast moving world of telecommunications. I love today’s theme because, well, my father *did* own a gold Oldsmobile in the Seventies. . . . Today’s telecommunications is certainly *not* my father’s trusty Oldsmobile anymore. Today’s telecommunications world consists of hopped-up race cars, hovercrafts, bullet trains, and rocket ships.

Since the Eighties when the Department of Justice broke up AT&T, the telecommunications world has changed so dramatically, it is almost unrecognizable.

Today, I will cover four topics:

1. How the telecommunications markets, technology and regulations used to be;
2. The changes in telecommunications markets;
3. The changes in telecommunications technology;
4. The challenges for regulators, attorneys and businesspeople.

The Old World

The old world is represented by a monopoly phone company that provided a black phone. A pink princess phone with push buttons and a light-up dial was its most exciting technological innovation.

In the old world, economic textbooks held up the phone industry as the ideal example of a perfect natural monopoly. Telephone service meant laying an extensive cable network, building many call switching stations, and creating support services like billing and operator services, all *before* initiating service. Additional lines or modes of communication that a competitor might provide were considered unneeded and a waste of investment. With high entry costs, it was logical for the law to prohibit newcomers from offering phone service.

Federal and state governments strongly encouraged this monopoly, which rather astonishingly survived until the Eighties.

As a matter of convenience, the phone world was split into interstate matters handled by the Federal Communications Commission (FCC), and intrastate matters handled by the state utility agencies.

In addition, a national policy of universal service was achieved, with almost every person in America having basic phone service available at an affordable rate.

To make this costly policy a reality, long distance and international calling subsidized cheap local calling. Through a regulatory policy of “settlements,” high rural costs were socialized and profitable urban companies shipped money to rural phone companies.

To make this elaborate structure work, rates were heavily regulated – often to keep the rates up in order to subsidize low rates for basic connections. Aggregate revenues were cost justified, and government essentially set prices by adopting tariffs.

The New Marketplace

In the Eighties, the FCC began licensing the first cellular phone companies, followed in the Nineties with up to 8 PCS wireless carriers, satellite video providers and wireless local cable companies.

With the passage of the Telecommunications Act of 1996, the last of the major legal prohibitions on entry into telecommunications markets ended. New entrants arrived in droves. After a decade, real competition has sprung up in earnest in most markets.

Let me provide some of the stunning statistics. Competitive phone companies provide service to about 16-20 percent of all access lines in the former Bell Operating Company territories; 26-33 percent of business access; and about 9 percent of residential access lines.

In California, competition has certainly hit home. From 2000 to 2004, SBC California – now AT&T – lost almost 19 percent of its residential switched access lines, including a loss of over 21 percent of its non-Lifeline primary residential switched access lines. During the same period, SBC California lost almost 23 percent of its business switched access.

Cable companies have become strong competitors for providing phone service. In March of 2005, a Cox press release stated that it has achieved a 40% penetration of the voice communications market in Orange County, California.

During the period following the passage of the 1996 Telecom Act, the use of wireless phones has skyrocketed and eclipsed wired phone usage. At the end of 2005, California had over 25.5 million wireless customers, and 22.6 million wireline customers. Approximately 5% of all customers are “cutting the cord” – not purchasing wireline service at all.

Also, the wireline network is in head-to-head competition with the wireless network for every minute of communication. The amount of time mobile subscribers spend talking and texting on their mobile phones has also increased. The volume of text message traffic grew to 48.7 billion messages in the second half of 2005, nearly double the text messages in the same period of 2004. As far back as 2003, about 25% of all minutes traveled on wireless networks.

In summary, the telecom monopoly is over, and competitive markets are alive and well.

The New Technologies

How did this change occur? The story of these dramatic market changes is in large part a story of the triumph of new technologies.

Now, the new world of telecommunications can be represented by the announcement of the iPhone by Apple Chief Steve Jobs at the MacWorld Expo last week. The iPhone is a mobile device that he promised would “reinvent the cellphone.” The iPhone is three things: an Ipod, a cellphone, and an Internet device.

This Mac operating system iPhone will enable users to listen to music, make wireless phone calls, send text messages and email, surf the Web, use Google Maps, and take and upload photos. The iPhone has a wide touch 3-1/2 inch screen and a single button. The iPhone will cost you \$499 for a 4GB model with a two year Cingular service contract.

The new world of telecommunications can also be represented by Voice Over Internet Protocol (VOIP) which refers to a technology that allows you to make voice calls using broadband Internet connections instead of a regular analog phone line.

Some IP-Phone to IP-Phone calls don't even touch the Public Switched Telephone Network. In that scenario, they bypass it entirely and pass the voice traffic exclusively through the Internet. These IP phones are essentially unregulated, and so not surprisingly service is cheap. Note however, a VOIP phone requires a broadband connection, may not work in a power outage, and may not have 9-1-1 capability.

Other Internet Protocol phones do connect to the regular phone network. These Internet phone companies have only light federal regulation relating to 9-1-1 service, universal service fund contributions, and meeting certain law enforcement (CALEA) requirements.

These VOIP calls all run on broadband networks. Broadband is the capacity to deliver Internet access with a continuous "always on" connection and the ability to both receive and transmit digital content or services at high speeds. Broadband enables voice, data, graphics and video-rich applications. Fast broadband is the key to the next generation of communications and Internet services. It will increase efficiency and productivity of Americans at work and home.

Broadband deployment is a goal supported by the President, the FCC, and most state utility agencies. These broadband networks are provided by cable companies, telephone companies, and wireless companies.

On a broadband network, voice is just another application. It is expected that the incumbent phone companies will no longer invest much money in legacy analog telephone plant; but will invest heavily in their new broadband networks. Telephone companies are banking on new revenue streams from fast Internet access and video services to keep them alive in the IP future.

The phone companies are competing head to head against the cable companies. Upgrades to cable plant have provided cable companies with lucrative revenues for broadband access, movies on demand, and cable phone services.

Both telcos and cable are bundling a "triple play" of video, broadband access, and voice services to consumers.

In this new world, regulation also must change with the times. The old regulatory constructs do not make much sense in today's converging marketplace.

Jurisdictional Fences That No Longer Make Sense

What are the implications of these changing markets and changing technologies for regulators?

Some of the biggest challenges faced by regulators are jurisdictional fences that no longer make sense.

Let's just take my world for a moment as a California PUC commissioner.

My state commission regulates intrastate wired phone and intrastate competitive local phone companies. The FCC in Washington DC regulates interstate and international calling.

The PUC regulates wireless phone companies only as to terms and conditions, but not as to entry and rates -- which is exclusively the FCC's bailiwick.

The PUC does not regulate Voice over Internet Protocol, or Internet services like DSL or broadband, or interstate phone services. The FCC asserted jurisdiction over broadband and Internet phones, but it has mostly allowed them to remain unregulated in order to foster innovation, with a few exceptions.

As a result, a local call will be regulated or unregulated depending on the technology used to carry the call. Since to the customer, the differences between communications technologies are only modest, it is no longer possible to fund social programs with rates above cost as long as cheaper and unregulated forms of communications exist.

The California State legislature just gave the California PUC limited authority to regulate video service providers, which will include incumbent phone companies and cable companies. But these video service providers still will be regulated by the FCC and local franchise authorities as to some aspects of their operations.

This jurisdictional complexity causes business folks to throw up their hands in despair. How can one innovate when the regulatory environment is like a steel trap?

A McKinsey report notes that regulation was created to deal only with telecom as a voice business conducted over a single infrastructure. Voice, broadband, data and video can now be bundled together on a number of

competing infrastructures, yet many regulatory constructs were created to deal with these services individually.

Unfortunately, some regulators still act as if the last mile monopoly has yet to be broken. They approach regulation of the incumbent phone carrier as if they are still the monopoly. As these phone companies lose lines to competitors like wireless, cable and Internet phone companies, it is clear that our regulatory premises are out of whack with today's marketplace.

We know this world well, but its days have passed.

Current Regulatory Issues

I now turn to my last topic, "What are the consequences of these changes for regulation today?"

As a result of this vast market and technological changes, modern regulators are faced with difficult issues as convergence makes our regulations look out of step with reality. Some argue our regulations are now barriers to entry. Some argue that all telecom regulation be abolished so innovators are free to innovate.

Here is a smorgasbord of issues a regulator today faces:

Which regulations stay and which should go?

Here's an example of this dilemma. Landline phone companies are traditionally heavily regulated. As new competitors like competitive phone companies, cable companies, and wireless companies vie for business, should vestiges of monopoly regulation like price restraints, promotional offer limits and reporting requirements be relaxed where appropriate?

In California, we looked at this question in our Uniform Regulatory Frameworks (URF) decision in August, 2006. We first assessed the level of competition. We found that the incumbent phone companies no longer had market power. We relaxed outdated regulations such as reporting, promotional offering restrictions, and advance filings of new services for the four biggest telephone companies. We retained a freeze on the basic residential rate until January 1, 2009, until we finished a companion universal service docket.

How much do you level the playing field between competitors, and what if jurisdictional limits get in the way?

Most regulators agree that where there is competition, we want to level the playing field between competitors, but in practice, this is harder than it sounds due to jurisdictional fences.

In the California URF decision, we found that phone companies competed fiercely with wireless phone companies. Yet, the PUC has no authority over wireless carriers' rates and entry, whereas we have complete authority over phone company intrastate rates and entry. Thus, phone companies experience more regulation and costs related to it, than wireless companies.

8 million Americans use Internet phones. Why? Because they are cheap. Skype offered free unlimited domestic and Canada Internet phone calls last year. This year, the same deal is \$30 for a year – that's \$2.50 a month. VOIP providers benefit from very little regulation in terms of costs saved.

Do you regulate new technologies like old technologies? Or, if it looks like a duck, walks like a duck, is it a duck? A good example of this one is VOIP or IP phones. If it looks like a phone, walks like a phone, should it be regulated like a landline phone? Up to now, the FCC said no as to VOIP, but with new VOIP regulations extending to 9-1-1, CALEA and Universal Service, maybe VOIP is becoming a duck. . .

How do we address the many public policy programs, such as universal service, in this brave new communications world? Regulators should review traditional social programs such as universal service and the access charge regime to reform them in light of technological advances, and make them technology neutral. Subsidies are still necessary in high cost areas, but we should support modern technologies in addition to legacy technologies. This is a very politically difficult job.

In this new competitive world, who is going to focus on consumer affairs and enforcement? Will it be the FCC, the state utility agencies, the local entities, or the attorney general or district attorneys? Answer, currently the answer is all of these entities, depending on the service, and this is why consumers are confused about where to bring complaints. California's PUC has led the way with consumer education in 12 languages, and clearer enforcement mechanisms.

Fixes, Political Battles and More

What can a business person do when his company has an innovation and has to put a toe in regulatory waters? Eight suggestions:

First, you can't ignore regulatory issues. So hire a regulatory expert who regularly appears before that regulatory agency to understand the issues. Explore both state and federal levels to make sure you don't miss something.

Second, do not develop a business strategy that depends heavily on regulators acting quickly or taking politically sensitive action. Note that despite the elegance of the FCC's unbundling schemes, companies that relied on regulation to provide them with key infrastructure went out of business during endless legal appeals, while companies that built infrastructure are more or less still around.

Third, recognize that regulatory agencies can put a damper on innovation. Take Apple's iPhone I mentioned earlier. At one point, the California PUC had adopted a rule that would have required a four digit PIN to be input every time a wireless phone user wished to place a non communications charge on her phone bill. This rule never went into effect, but you can see that while the rule was well intentioned to protect consumers from fraudulent charges, it could have discouraged mobile ecommerce as to wireless handsets from taking place. Moreover, given the regulatory structure we had previously adopted, the PUC would need to decide whether a ring-tone was different from a song – our regulatory system appeared to treat them differently.

Fourth, take the time to visit your political representatives and educate them on the problems the old laws are causing to your business. In California, we have found that the old laws discourage infrastructure investment, but our new Silicon Valley and entertainment industry must have a very fast broadband infrastructure to advance. Companies that saw themselves outside the ambit of regulation now see that they have a stake in this world as well. High tech companies have formed a lobbying group both in Sacramento as well as DC to further their interests.

Fifth, be specific as to reforms that you think are necessary. Politicians and regulators need practical solutions, not just gripes.

Sixth, argue that broadband deployment and access must be established as a government priority.

Tell them that barriers to deployment must be identified and eliminated. Examples include reforming rights of way policies, making government facilities available for communications facilities quickly and at reasonable cost, streamlining environmental review of communications facilities, streamlining certification processes for new carriers, and routinely installing duct work in roads when they are being dug up anyway.

New broadband technologies, such as Broadband over Power Lines, and wireless alternatives like Wi-Fi or WiMax, should be encouraged.

Seventh, advocate that government should refrain from unnecessary regulation of new technologies.

Eight, participate in the process:

- Donate money only to politicians who support your cause.
- Work through your industry association to lobby for major changes.
- Lobby federal and state agency commissioners on your issues.
- Write letters to the editors or blog about the problems.

It is time to act, not just in your professional practices, but in every part of the public process.

Thank you.